

REPORT ON WATER TUBE BOILERS.

No. 14953

of writing Report

19

When handed in at Local Office 8/4/1950

Received at London Office

13 APR 1950

No. in

Survey held at

Belfast

Port of Belfast

g. Bk.

on the

Twinscrew "Runic"

Date, First Survey

Visits included in 72. weekly

Last Survey

19

lt at

Belfast

By whom built

Harland & Wolff Ltd.

When built

1950

ines made at

By whom made

D.

When made

1950

lers made at

By whom made

D.

When made

1950

inal Horse Power

3280

Owners

Shaw Savill & Albion Co. Ltd.

Port belonging to

Southampton

ATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

e of Approval of plan

Boilers 2 Foster Wheeler Controlled Steam

DESIGN

Working Pressure 490 lb.

Tested by Hydraulic Pressure to 785 lb.

Number and Description or Type

of Certificate

1430

Can each boiler be worked separately

yes

Total Heating Surface of Boilers

Date of Test 2-2-50

forced draught fitted

yes

Area of fire grate (coal) in each Boiler

and type of burners (oil) in each boiler

3 Outboard (Sat.) 4 Inboard (Sat.) Wallend Type

No. and description of safety valves on

boiler 1-2 1/2 Full Bore Single Valve Steam Drum

Area of each set of valves per boiler

per rule

app

Pressure to which they

adjusted 490 lbs.

Are they fitted with easing gear

yes

In case of donkey boilers state whether steam from main boilers can enter

donkey boiler

No

Smallest distance between boilers or uptakes and bunkers or woodwork

24"

Height of boiler 21'11"

th and Length 25'0" x 17'0"

Steam Drums:—Number in each boiler

One

Inside diameter

WRAPPER PLATE 4'6 3/8"

ckness of plates

WRAPPER PLATE 1 1/4"

TUBE PLATE 2 3/4"

Range of Tensile Strength 28/32 tons/sq"

Are drum shell plates welded

langed

Welded

If fusion welded, state name of welding firm

Broomfield Boiler Works Co.

Have all the requirements of the rules

Class I vessels been complied with

yes

Description of riveting:—Cir. seams

long. seams

meter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

joint:—Plate

Rivet

Diameter of tube holes in drum

1 1/4", 2 3/4", 5"

Pitch of tube holes

4' 3 1/8" For 2" tubes

centage strength of shell in way of tubes

35.5 x 49.6 For 2"

Steam Drum Heads or Ends:—Range of tensile strength 26/30 tons/sq"

ckness of plates

1 1/2", 1 5/8"

Radius or how stayed

4'0" Rad. Inside

Size of manhole or handhole

16" x 12"

Water Drums:—Number

each boiler

2

Inside Diameter

2'0"

Thickness of plates

1 3/4"

Range of tensile strength

28/32 tons/sq"

Are drum shell plates

led or flanged

Forged

If fusion welded, state name of welding firm

Have all the requirements of the rules

Class I vessels been complied with

yes

Description of riveting:—Cir. seams

long. seam

meter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

centage strength of long. joint:—Plate

Rivet

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35.5 x 49.6 For 2"

Water Drum Heads or Ends:—Range of Tensile strength 28/32 tons/sq"

ckness of plates

2 1/2"

Radius or how stayed

2'11" Rad. Inside

Size of manhole or handhole

16" x 12"

ders or Sections:—Number

3

Material

Steel

Thickness

1 1/4" - 0.116"

3 1/4" - 0.3125"

1 1/4" - 0.1203"

Tested by Hydraulic Pressure to 785 lb/sq"

es:—Diameter

1 1/4", 2", 3 1/4", 5"

Thickness

2" - 0.192"

5" - 0.341"

Number

2 - 269

5 - 104

Steam Dome or Collector:—Description of

to Shell

Inside diameter

Thickness of shell plates

Range of tensile

gth

Description of longitudinal joint

If fusion welded, state name of welding

Have all the requirements of the rules for Class I vessels been complied with

Diameter of rivet holes

h of rivets

Thickness of straps

Percentage strength of long. Joint

Plate

Rivet

wn or End Plates:—Range of tensile strength

Thickness

Radius or how stayed

PERHEATER. Drums or Headers:—Number in each boiler

2

Inside Diameter

6 5/8" Rad.

ckness

1 1/2"

Material

Steel

Range of tensile strength

28/32 tons/sq"

Are drum shell plates welded

langed

Forged

If fusion welded, state name of welding firm

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Pitch of rivets

Thickness of straps

Percentage strength of

joint:—Plate

Rivet

Diameter of tube holes in drum

1 1/8"

Pitch of tube holes

1' 1 1/16"

Percentage strength of

n shell in way of tubes

37.9

Drum Heads or Ends:—

Ends.

Thickness

1 3/4"

Range of tensile strength 28/32 tons

Radius or how stayed

Flat

Size of manhole or handhole

-

Number, diameter, and thickness of tubes 292, 1 1/8", 0.116"

led by Hydraulic Pressure to

785 lb/sq"

Date of Test

2-2-50

Is a safety valve fitted to each section of the superheater which

be shut off from the boiler

No.

and description of Safety Valves

1-2 1/2" Full Bore Double Spring

Area of each set

gives

9.8174"

Pressure to which they are adjusted

435 lb/sq"

Is easing gear fitted

yes

ure Gear. Has the spare gear required by the rules been supplied

yes

Class I vessels been complied with

yes

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Pitch of rivets

Thickness of straps

Percentage strength of

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Date of Test

2-2-50

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be shut off from the boiler

No.

Steel T.S. Steamer "Runic"

Barland & Wolff Ltd Yand N° 1414.

During the course of fitting the steel sheathing over insulation, the outer downcomer tube between steam drum & superheater side water drum at the aft end of starboard boiler, was pierced by a $\frac{3}{16}$ " dia drill about 9" from the steam drum.

As a new pipe could not be obtained for some considerable time the hole was tapped (fine thread) & a screwed plug fitted, with a small head on inside of tube projecting about $\frac{1}{16}$ " beyond outer wall & spot welded. This repair was tested under full working pressure & found in order.

The above was effected in cooperation with the Owners Supt. who requested that the removal of the tube might be deferred to Owners convenience, the intention being that the new tube would be fitted within the guarantee period of 12 months.



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Foundation

2 1/2" - 1" Double for left.
— — — — —
piece for down



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